

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/016809

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int.Cl. <sup>7</sup> <b>G09F9/30, H05B33/14, H01L29/786, H01L21/288, H01L21/3205</b> According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) Int.Cl. <sup>7</sup> <b>G09F9/30, H05B33/10-33/28, H01L29/786, H01L21/288, H01L21/3205</b>  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched <b>Japanese Utility Model Gazette 1922-1996, Japanese Publication of Unexamined Utility Model Applications 1971-2005, Japanese Registered Utility Model Gazette 1994-2005, Japanese Gazette Containing the Utility Model 1996-2005</b>  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 7-312290 A (NEC CORPORATION) 1995.11.28 paragraph [0037] - [0047], figs. 2, 3 & US 5747930 A1 & EP 684753 A1	1-13, 20-33
Y	JP 11-112001 A (SEMICONDUCTOR ENERGY LABORATORY CO., LTD.) 1999.04.23 paragraph [0136] - [0142], fig. 10 paragraph [0174] paragraph [0065]	2, 7-13, 20-32 3, 4 5, 6
A	paragraph [0136] - [0142], fig. 10 & US 6013930 A1 & US 2001-049163 A1	14-19, 34, 35
Y	JP 2003-058077 A (FUJI PHOTO FILM CO., LTD.) 2003.02.28 whole document (family:none)	1-13, 20-33
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>		
Date of the actual completion of the international search <b>04.02.2005</b>		Date of mailing of the international search report <b>01.3.2005</b>
Name and mailing address of the ISA/JP <b>Japan Patent Office</b> 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer <b>Hajime Kitagawa</b> Telephone No. +81-3-3581-1101 Ext. 3274
		<b>2M 9804</b>

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2000-206509 A (ALPS ELECTRIC CO., LTD.) 2000.07.28 paragraph [0018] (family:none)	7, 8, 20-25